

Protection From Radiation

There are three basic forms of protection from radiation: time, distance and shielding.

- **Time:** For people who are exposed to radiation in addition to natural background radiation, limiting or minimizing the exposure time will reduce the dose from the radiation source.
- **Distance:** In the same way that the heat from a fire is less intense the further away you are, so does the intensity of radiation decrease the further you are from the source of the radiation. The dose decreases dramatically as you increase your distance from the source.
- **Shielding:** The types of shielding depend on the radiation.
 - **Alpha particles** are easily shielded by a piece of paper or human skin. Therefore, health effects of alpha exposure occur only when the particles are inhaled or ingested, or enter the body through a cut in the skin.
 - **Beta particles** are fast electrons produced following nuclear decay of certain radioactive materials. Six millimeters of aluminum are needed to stop most beta particles.
 - **Gamma rays**, an electromagnetic wave, are similar in form to visible light and radio waves. Gamma rays are produced from radioactive decay, in nuclear reactions, and in fission. Gamma rays are dangerous because they have great penetrating ability. Several millimeters of lead are needed to stop gamma rays.

